Friday, February 10th

- Reminder: Extra help Tuesday's and Thursday's at lunch hour
- Next Test/Quiz: Proportional Reasoning Quiz TODAY
- Next Assignment Due: TODAY

Today:

- Quiz today and Assignment due!
- Online Survey -- Need netbooks!
- Begin Section 1.3 Setting the Price
- Notes/Examples/Practice questions
- Classwork/Homework

Lesson 3

1.3 Setting a Price

MATH *ON THE JOB*

Maurice Meagher is the owner of Case Handyman and Remodeling, a business that performs renovation, remodeling, building, and designing services in Halifax, Nova Scotia. Maurice grew up in Port Hawkesbury, NS, where he went to high school at the Strait Area Education Recreation Center.

Maurice's job includes drawing up yearly and monthly budgets. He also calculates averages of past sales to help him forecast changes in staffing and cash flow. Another important part of Maurice's job is estimating how much it will cost to complete different building, renovation, or remodeling projects.

Maurice is estimating the cost of remodeling the floors of a home. He calculates that the floor space measures 1500 square feet. He determines that the cost of the entire job, including labour and materials such as ceramic tile and grout, will be $27 000.00. What is the cost per square foot for the remodeling?

Maurice's job involves estimating the cost of building decks and sunrooms.

The price at which goods and services are sold has an impact on you whether you are a consumer or working in a business.

Prices rise and fall due to consumer demand and supply. If demand rises, suppliers are able to charge more. If demand falls, or if there is a large supply of a product, prices may fall.

Prices also rise and fall according to the cost of the materials and labour that go into the creation of a product or service. An additional amount, called **markup**, is added to these costs so that a profit can be made. For example, when the owner of a retail store buys items to re-sell, he or she buys them at a wholesale price. This price is then marked up and the item is sold at a higher retail price. The markup is usually a **percent** of the wholesale price.

Percent:

- percent means "out of 100"
- a percentage is a ratio in which the denominator is 100

There are 3 ways to write percent:

30% $\frac{30}{100}$ 0.30

0.5% = 0.005

A few basic examples using percentages:

#1 Change the following percents into decimals: (÷ 100)

a. 37% = 0.37 b. 205% 2.05 c. 7% = 0.07

#2 Find the percent of the number:

80% of 60 0.80 x 60 = 48

#3 Find the original number:

45% of what number is 10?

$0.45x = 10$ $x = 22.\overline{2}$

$\frac{0.45x}{0.45} = \frac{10}{0.45}$

Monday, February 13th

- Reminder: Extra help Tuesday's and Thursday's at lunch hour
- Next Test/Quiz: Setting the Price/Sale Price/Currency Quiz Thursday
- Next Assignment Due: Thursday, February 16th

Today:

- Go over answers to board questions from Friday
- Finish Section 1.3 Setting the Price
- Notes/Examples/Practice questions
- Classwork/Homework
- Begin Section 1.4 Sale Price

Percent

Copy & Complete

Practice Questions:

#1 Change the following percents into decimals:

a. 25% 0.25 b. 105% 1.05 c. 2% 0.02

#2 Find the percent of the number:

a. 25% of 45 b. 33% of 50 c. 4% of 20

$0.25 \times 45 = 11.25$ $0.33 \times 50 = 16.5$ $0.04 \times 20 = 0.8$

#3 Find the original number:

a. 30% of what number is 42?

$0.30x = 42$ $x = 140$

b. 55% of what number is 12?

$0.55x = 12$ $x = 21.81$

c. 75% of what number is 20?

$0.75x = 20$ $x = 26.\overline{6}$

Markup: the difference between the amount a dealer sells a product for and the amount he or she paid for it

Example:

If Bill sells a $150 item at a 20% markup, how much will the item sell for?

20% of 150

$0.20 \times 150 = 30$

$150 + 30 = 180$

100% + 20% = 120%

$150 \times 1.20 = 180$

Example 1

Arlene purchases fabric at a wholesale price for her custom sewing business in Cavendish, PEI. She pays $46.00/m. She charges a markup of 20% on the fabric. What will Arlene charge her clients per metre?

$46.00 \times 1.20 = \$55.20/m$

or

$46.00 \times 0.20 = 9.20 + 46 = \$55.20/m$

Please copy this into your notes:

FIGURE 1.1
PST, GST, and HST in Atlantic Provinces

	GST	*PST*	*HST*
Nova Scotia			15%
New Brunswick			13%
Newfoundland and Labrador			13%
Prince Edward Island	5%	10%	

Example 2

A furniture store in Charlottetown, PEI, is selling a bedroom suite. The list price for the suite is $1599.00. What will the total cost be, including GST and PST?

$1599.00 \times 0.15 = 239.85$ ← 15%

$+\ 1599.00$ ← 100%

$\$1838.85$ 115%

115% = 1.15

1599×1.15

$= \$1838.85$

Mental Math and Estimation

If you set the price of a bike helmet at $49.95 and sell 25, how much less income will your store generate than if you sold the same number at $54.95?

$49.95 \times 25 = 1248.75$

54.95×25

$= 1373.75$

-1248.75

$\$125.00$

Tuesday, February 14th

Happy Valentine's Day!

- Reminder: Extra help Tuesday's and Thursday's at lunch hour
- Next Test/Quiz: Setting the Price/Sale Price/Currency Quiz Thursday
- Next Assignment Due: Thursday, February 16th

Today:

- Check and go over homework Pg.32
- Begin Section 1.4 Sale Price
- Notes/Examples/Practice Questions
- Classwork/Homework
- Work on Assignment

Classwork

Pg. 32 # 1 to 6 (omit #3)

Assignment questions:
#1,2,3,5,8,9,13,14

1. Max owns a clothing store. He buys an order of shirts for $22.75 per shirt. In order to make a profit, he wants to mark them up 60%. What will the list price of the shirts be for customers?

$22.75 \times 1.60 = \$36.40$

2. An outfitter in St. John's, NL, sells full-brim aluminum hard hats for $49.95 and steel-toed work boots for $129.95. If you purchase a hard hat and two pairs of boots, what will your total cost be, including tax? How much HST will you pay on these three items?

13%

$$\begin{array}{r} 49.95 \\ 129.95 \\ 129.95 \\ \hline \$309.85 \end{array} \times 0.13 = \$40.28 \text{ (HST)}$$

$+ \$309.85$

$= \$350.13$ (Total)

4. Roberta works for a retail hardware store in Bathurst, NB. She buys 3 sinks for $89.95 each, 2 bathtubs at $639.95 each, and 2 faucets for $74.95 each. She sells one sink, one bathtub, and 2 faucets to a customer at a 25% markup. How much does she charge her customer?

89.95
639.95
74.95
+ 74.95
$879.80 x 1.25 = $1099.75

5. Erma is a member of the Eastern Woodland Métis Nation. She runs an organic blueberry farm in the Annapolis Valley, NS. She sells her crop in three ways: direct to customers who come to the farm, at $3.50 a quart; at the local farmers' market at $3.99 a quart; and wholesale to organic food stores for $2.00 a quart.

a) If she sells 50 quarts at $3.50, 175 quarts at $3.99, and 250 quarts at $2.00, what is her total income? = $1373.25

b) Compare her income from 100 quarts sold directly at the farm to 100 quarts sold to a wholesaler. What is the difference in income? Why would she sell to a wholesaler?

3.50 x 100 = $350
2.00 x 100 = $200
$150

6. When Julie completed the baker apprenticeship program and started her own cake business, her first order was to provide cakes for 100 people at a business luncheon. After calculating the cost of all her supplies and ingredients, her time, and the cost of gas for delivering the cakes, she found that her price of $2.50 per portion did not cover her costs.

a) If she increased her price by 15%, what would the new unit price be? $2.50 \times 1.15 = \$2.88$/portion

b) How much more would she make on 100 servings at the higher price? \$250 \$288 $= \$38$

c) If she thought customers would reject a 15% price increase, how might she lower her costs?